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HYOPHILA SUBCUCULLATA SP. NOV.

R. S. WILLIAMS

Antoicous, 1 to 3 antheridia about 0.2 mm. long, with few or no paraphyses, more or less enclosed by 1 or 2 concave, pale, smooth, costate leaves less than 0.5 mm. long, situated so close to the perichaetium as to appear at times paroicous: plants in cespitose, brownish-green mats with mostly simple stems 4 or 5 mm. long; stem-leaves incurved and more or less crispate with involute margins when dry, nearly straight and somewhat spreading when moist, the upper about 2 mm. long, oblong to oblong-linear, widest about halfway up the leaf, entire, the apex somewhat cucullate, rather broadly acute and shortly apiculate, the lower leaves very small; costa stout, nearly or quite smooth on the back, papillose on the inner face, about 40μ wide halfway up, excurrent, in cross-section near the middle showing about 4 guide-cells, stereid cells above and below them and outer cells differentiated, much larger on the upper than under side; cells of upper part of leaf distinct, mostly mamilllose and papillose on both sides, more or less roundish to transversely elongate, the median $6-8\mu$ in width, the basal cells paler, smooth, irregularly elongate to rectangular, up to 60 or 80μ long; perichaetial leaves not differentiated or sometimes a short inner leaf; seta 4 to 5 mm. long; capsule elongate-oval, a little contracted below the mouth when dry and empty, about 1.2 mm. long without the lid, the somewhat obliquely beaked lid one-half to two-thirds as long, the stomata few, in one row close to the base; peristome and annulus none; calyptra cucullate, extending halfway down the capsule, becoming somewhat twisted on falling off; spores rough, about 20μ in diameter.

San Diego River, Pinar del Rio Province, Cuba. Brothers Leon and Hioram, number 4515, August, 1914.

This species is perhaps nearest *H. microcarpa* but the inflorescence is different, the capsules rather larger, the leaf-cells more distinct, and the apex of leaf incurved, not somewhat recurved as in that species.

NEW YORK BOTANICAL GARDEN

EXPLANATION OF PLATE II

HYOPHILA SUBCUCULLATA WILLIAMS, SP. NOV.

- FIG. 1. Plant about natural size.
FIG. 2. Capsule with lid, $\times 16$.
FIG. 3. Calyptra, $\times 16$.
FIG. 4. Empty capsule, $\times 16$.
FIG. 5. Part of rim and upper cells of capsule, $\times 180$.
FIG. 6. Antheridia with bract, $\times 100$.
FIG. 7. Median leaf-cells, $\times 210$.
FIG. 8. Basal cells, $\times 210$.
FIG. 9. Stoma, $\times 180$.
FIG. 10 and 11. Cross-sections of leaf above and near the middle, $\times 180$.
FIG. 12, 13, and 14. Stem-leaves, $\times 35$.

